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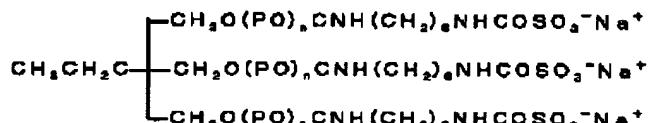
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APPLICANT : KURABO IND LTD;

INVENTOR : KANDA TAKUSHI;

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TITLE : SOLUBILIZATION OF ANIMAL HAIR  
AND ITS USE



ABSTRACT : PROBLEM TO BE SOLVED: To provide a method imparting hygroscopicity to cotton fibers by treating the fibers with a specific cross-linkable compound obtained from the reaction of a water-soluble protein of animal hair keratin that is obtained by treating the animal hair with an aqueous solution including hydrogen peroxide and ammonia, with a polyisocyanate.

SOLUTION: The water-soluble protein of animal hair keratin is obtained by previously immersing the animal hair such as waste wool or the like in an aqueous solution including 0.35-1.4 wt.% of hydrogen peroxide and ammonia, manifesting pH 7-9 for 10-30 minutes at room temperature to 50°C under normal pressure, and heating at 130-200°C for 30-60 minutes under a pressure in a closed condition. The cotton fibers or the like are immersed in an aqueous solution of the cross-linking compound of pH 8-11 obtained by reacting the protein and the polyisocyanate compound expressed by the formula (PO is a propylene oxide; n is 12-30) having at least three isocyanate groups in the molecule protected by a blocking agent of sodium hydrogen sulfite in a water system at 20-50°C, pH 8-11, and heat treated at 120-180°C after dehydrating and drying to impart the hygroscopicity.

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